

Date: Wed, 16 Mar 94 23:36:33 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #298
To: Info-Hams

Info-Hams Digest Wed, 16 Mar 94 Volume 94 : Issue 298

Today's Topics:

(none)
10 GHz EME question (3 msgs)
1x1 Callsigns?
2 meter use in London, England?
Alinco 180
Looking for KA2ZNB
Net Schedule
Part 97
Sorting the confusing between World and Oakland
Tickling the Ether

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party. Your mileage may vary. So there.

Date: 17 Mar 94 05:30:16 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: info-hams@ucsd.edu

(*
To All hams interested.

I said a long time ago that I would release this source code. Well, here it is! It does work rather well, and in fact, better than the phone! I am currently developing a **** FREE **** repeater controller package around this idea, along with voice mail and the like, but, I am in need of some more assistance. Is anyone interested in helping me out with

some ideas? I just need a jump start, and I would prefer to have some source assembler code for another repeater controller.

Not too long ago, I saw such a program, but lost it (and the BBS is down!) Please, if you can help me out, drop me a line via the internet address given below (It is hard for me to read this newsgroup; just send me a note).

Thanks,
Jim (N9IE0)
internet: jjacobse@siucvmb.siu.edu

DTMF Touch Tone Generator

Written by: Jim Jacobsen (N9IE0) (jjacobse@siucvmb.siu.edu)

This program uses the Sound Blaster FM chips to generate Touch Tones

*)

Unit SBlaster;
Interface
Uses Dos;

Procedure Generate_tone(c1,c2: word);
Procedure Release_tone;
Procedure touchtone(c: char);
implementation

Const

tns: array[1..8] of word = (920,1019,1586,1640,1824,1905,2004,2590);

Var

r1,r2: word;

(* This is an internal function to write a tone to the adlib/sound
blaster card *)

Procedure Writeport(reg,val: word);
var i,c: word;
Begin
port[\$388]:=reg;
for i:=1 to 12 do c:=port[\$388];
port[\$389]:=val;
for i:=1 to 30 do c:=port[\$388];
end;

Procedure Generate_tone(c1,c2: word);
Begin

```

writeport($b3,$2f); writeport($b4,$2f);
writeport($e0,0);    { Set Wave for voice 1 }
writeport($e1,0);    { Voice 2 }
writeport($c0,1);    { Use Additive Synthesis }
writeport($c1,1);
writeport($20,1);    { Multiple - 1 }
writeport($21,1);
writeport($40,$1);   { Level - 0 Highest }
writeport($41,$1);
writeport($60,$f0); { Attack / Decay }
writeport($61,$f0);
writeport($80,$Ff); { Sustain / Release }
writeport($81,$Ff);
writeport($a0,c1 and $ff); { Note # }
writeport($a1,c2 and $ff);
writeport($b0,$30 or (c1 shr 8)); { Note on, Octave }
writeport($b1,$30 or (c2 shr 8));
r1:=c1 shr 8; r2:=c2 shr 8;
end;

```

(* This procedure silences the tones *)

```

procedure release_tone;
Begin
  writeport($b0,r1);
  writeport($b1,r2);
end;

```

(* This procedure is used to generate DTMF tones, use the valid DTMF digits *)

```

procedure touchtone(c: char);
var
  w1,w2: word;

Begin
  c:=upcase(c);
  if c in ['0'..'9','A'..'D','#','*'] then
    begin
      case c of
        '1','4','7','*': w1:=tns[5];
        '2','5','8','0': w1:=tns[6];
        '3','6','9','#': w1:=tns[7];
        'A'..'D':       w1:=tns[8];
      end;
      case c of
        '1','2','3','A': w2:=tns[1];

```

```

    '4','5','6','B': w2:=tns[2];
    '7','8','9','C': w2:=tns[3];
    '*','0','#','D': w2:=tns[4];
end;
generate_tone(w2,w1);
end;
end;

end.

```

```

-----

Date: Wed, 16 Mar 1994 17:10:07 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!emory!wa4mei!ke4zv!gary@network.ucsd.edu
Subject: 10 GHz EME question
To: info-hams@ucsd.edu

```

In article <16MAR94.10615803.0021.MUSIC@SLUMUS> MOWE%SLUMUS.BITNET@CUNYVM.CUNY.EDU (Michael Owen) writes:

>The Toronto VHF Society (VE3ONT) is beginning to make
>plans for EME operations using the 46 m (150') dish at
>Algonquin Park later this year.

>
>We have been discussing the possibility of trying EME on
>10 GHz. The dish is figured to at least 12 GHz, and is
>adequately steerable. The question is this: is there any
>point to using such a big dish at 10 GHz for EME? One
>argument says "yes, the gain will be humungous." Another
>argument says "no, the high gain of the dish will under-
>illuminate the Moon so there is no *real* monster gain."

>
>I subscribe to the latter point of view. It seems to me that
>an antenna beamwidth of < the Moon's diameter doesn't benefit
>the overall link budget. By this argument, 10GHz EME is
>optimum with a dish about 4m in diameter (beamwidth about 0.5
>degrees, the apparent width of the Moon). The 46 m dish will be
>no better than a 4 m dish.

>
>So... am I correct?

I don't think so. The libration fading will be much reduced by illuminating a smaller portion of the Moon. And gain is gain, the extra gain will be usable for transmit. For receive it's a somewhat different matter. Stations using small dishes will be illuminating the entire lunar hemisphere. Your dish will only receive part of that energy since the rest will fall outside your beamwidth. But the extra dish gain should compensate for

that, and your receive strength should be similar to that of a dish that just illuminates the entire Moon. And, you'll receive less thermal noise from the rest of the Moon, and less libration fading. So while the big dish won't be that much better for receive, it won't be worse, and on transmit it will be a big help to other stations because it's reflected signal will behave more like a strong point source.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: 16 Mar 1994 20:33:03 +0200
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!
howland.reston.ans.net!EU.net!sunic!news.funet.fi!news.cc.tut.fi!
lehtori.cc.tut.fi!not-for-mail@network.ucsd.edu
Subject: 10 GHz EME question
To: info-hams@ucsd.edu

Michael Owen (MOWE%SLUMUS.BITNET@CUNYVM.CUNY.EDU) wrote:

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> argument says "yes, the gain will be humungous." Another
> argument says "no, the high gain of the dish will under-
> illuminate the Moon so there is no *real* monster gain."

Assuming similar reflective properties of the lunar soil in the optical band and in the SHF band no monster gain should be expected. Look at the Moon during opposition (full Moon), the highlands in the center of the lunar disk are as bright as the highlands near the periphery of the disk. Thus no benefit should be expected from concentrating all radiation on a small spot in the highland area of the Moon and no net gain should be expected. (When the Moon is in opposition, the light from the Sun illuminates the lunar surface from the same direction as an EME transmitter).

On the other hand, if the illuminated spot size on the Moon is much smaller than the lunar diameter and the antenna can be controlled precisely, you could avoid low reflectivity (Mare-) areas. Thus the effective reflectivity is higher and you would get some net gain.

If the receiver is sensitive enough so that you can hear the thermal noise from the Moon, the antenna should be aimed at the coldest part of the surface, to areas where the Sun is going to rise in a few days. These areas have been in darkness for almost two weeks. This should be tried before the Moon is in the first quarter, so that the spot can be positioned based on other criteria and not just the temperature.

Other things to investigate is how a small spot size affects libration fading and coherence bandwidth when beamed at a flat area (Mares).

I would expect that the readability could be improved by lower noise and lower signal distortion/dispersion even if the received power remains (almost) the same.

Paul OH3LWR

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X.400 : G=Paul S=Keinanen O=Kotiposti A=ELISA C=FI
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Telex : 58-100 1825 (ATTN: Keinanen Paul)
Mail : Hameenpuisto 42 A 26
FIN-33200 TAMPERE
FINLAND

Date: Wed, 16 Mar 1994 20:23:52 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!
howland.reston.ans.net!wupost!gumby!newsxfer.itd.umich.edu!ncar!col.hp.com!
srngenprp!alanb@network.ucsd.edu
Subject: 10 GHz EME question
To: info-hams@ucsd.edu

Michael Owen (MOWE%SLUMUS.BITNET@CUNYVM.CUNY.EDU) wrote:
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: illuminate the Moon so there is no *real* monster gain."

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: an antenna beamwidth of < the Moon's diameter doesn't benefit
: the overall link budget. By this argument, 10GHz EME is
: optimum with a dish about 4m in diameter (beamwidth about 0.5
: degrees, the apparent width of the Moon). The 46 m dish will be
: no better than a 4 m dish.

I disagree.

Illuminating the center of the moon is more effective than the edges.
A surface radiates maximally in the perpendicular direction. I believe
the radiation falls off as the cosine of the angle, or even faster
depending on surface type. This happens on both transmit and receive.
Since the edges of the moon point away from the earth, much of that
power is wasted.

Assuming the 46m dish has $\text{SQRT}(4/46) = .3$ times the beamwidth of the
4 meter dish, then that may result is a fairly optimum illumination
of the moon. It should help reduce libration fading as well.

AL N1AL

Date: 16 Mar 1994 19:57:13 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!math.ohio-
state.edu!news.acns.nwu.edu!casbah.acns.nwu.edu!lapin@network.ucsd.edu
Subject: 1x1 Callsigns?
To: info-hams@ucsd.edu

In article <CMGtpo.4t9@cup.hp.com>, Jim Hollenback <jholly@cup.hp.com> wrote:
>Bob Levine (levine@mc.com) wrote:

>: Has anyone seen anything in print about whether the vanity
>: callsign program (someday) might allow 1x1 calls?

>

>: (for info, a 1x1 is like K1X)

>

>

>No, but I've heard ther is a 2X1 ... JY1

>

>Jim, WA6SDM

>

That's 2x0, but I think you have to be royalty to get it :-)

Greg, KD9AZ

Date: 16 Mar 1994 18:11:39 -0000

From: news.cerf.net!pravda.sdsc.edu!acsc.com!wp-sp.nba.trw.com!elroy.jpl.nasa.gov!
swrinde!cs.utexas.edu!convex!news.utdallas.edu!corpgate!bnrgate!bnr.co.uk!pipex!
uknet!acorn!@ihnp4.ucsd.edu
Subject: 2 meter use in London, England?
To: info-hams@ucsd.edu

In article <2m7dmi\$7pr@usenet.INS.CWRU.Edu> cw400@cleveland.Freenet.Edu (Eric L. Bartholomew) writes:

>
>

>Most repeaters in Europe, including the UK, require a 1750 Hz
>tone burst at the beginning of your transmission to access the
>repeater. European ham gear usually include the tone burst as
>a standard feature, but your american gear will not have this
>feature.

UK repeaters are moving toward responding to CTCSS tones as well as a 1750Hz toneburst. The CTCSS tone is allocated by area in a system that almost, but not completely, fails to stop the users of other repeaters (on the same frequency) accessing both under lift conditions. The tone in use is announced by a single letter tacked onto the end of the repeater's CWID - sorry, I forget the encoding scheme. Some repeaters also transmit the same tone when their input is unquelled, so if your radio permits you may be able to scan the tones until you detect the one in use.

UK repeaters aren't allowed to use CTCSS to limit access to a closed user group - only to reject interference.

>

>Perhaps you could install the burst encoder in a speaker/mic,
>eliminating the need to perform surgery on your HT. Communication
>Specialists of California sells a suitable tone burst board,
>you can get their 800 number out of any of the ham mags.
>

UK hams who own ex-PMR gear and can't be bothered to add a toneburst board acquire the ability to whistle at 1750 Hz - this isn't really very hard, as most repeaters aren't too fussy : a slowly rising

whistle will usually do the job.

-adrian, g7hwn

Date: 16 Mar 1994 21:20:05 GMT
From: ihnp4.ucsd.edu!swrinde!emory!news-feed-2.peachnet.edu!concert!
lester.appstate.edu!usenet@network.ucsd.edu
Subject: Alinco 180
To: info-hams@ucsd.edu

I have an Alinco 180 (?) 2 meter HT and can't figure out how to enable
the extended receive. Does anyone out there know? I can't remember.

KE4FPZ

Date: Mon, 14 Mar 1994 18:04:58 GMT
From: hub.cs.jmu.edu!hearst.acc.Virginia.EDU!cscsun!dtiller@uunet.uu.net
Subject: Looking for KA2ZNB
To: info-hams@ucsd.edu

Wilfried Besig (wil@maschinenbau.tu-ilmenau.de) wrote:

: Hi,
: I am looking for the location of KA2ZNB, who lived in Cape Cod previously.
: The address in the NA-callbook seems not to be updated.
: Does anybody know him?
: We had many 2m QSOs when he has been in Germany. But now we have lost the
: connections.
: My former callsign was Y21DK , now I am DG00D.
: 73,and thanks for reading this message.

I get:

David A. Pillsbury
HHC 54TH ENGR BN
APO NY, NY 09026

Is that the same address that's in the callbook?

It would seem he's in the military with an address like that. Heaven knows
where he really is. If he's still in the service, they'll forward his mail
to him.

--

David Tiller	Network Administrator	Voice: (804) 752-3710	
dtiller@rmc.edu	Randolph-Macon College	Fax: (804) 752-7231	
"Drunk, [Beowulf] slew	P.O. Box 5005	ICBM: 37d 42' 43.75" N	
no hearth companions."	Ashland, Va 23005		77d 31' 32.19" W

Date: Tue, 15 Mar 1994 11:10:04 GMT
From: netcon!hatch!pro-palmtree!pro-janin!jestevez@locus.ucla.edu
Subject: Net Schedule
To: info-hams@ucsd.edu

***** Propagation Schedule *****

Updated: 21 Jan 1994

UTC W0 W1 W2 W3 W4 W5 W6 W7 W8 W9 XE VE 6Y

0100
0200
0300
0400
0500
0600
0700
0800
0900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300

Date: 16 Mar 1994 21:16:56 GMT
From: ihnp4.ucsd.edu!swrinde!emory!news-feed-2.peachnet.edu!concert!
lester.appstate.edu!usenet@network.ucsd.edu
Subject: Part 97
To: info-hams@ucsd.edu

Is there a way I can get a copy of the revised Part 97 via e-mail?

Shawn Watkins
KE4FPZ

Date: Wed, 16 Mar 1994 20:47:45 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!math.ohio-state.edu!
magnus.acs.ohio-state.edu!csn!csus.edu!netcom.com!wy1z@network.ucsd.edu
Subject: Sorting the confusing between World and Oakland
To: info-hams@ucsd.edu

I have received many questions about where the ham radio FTP files are -
World or Oakland?

When I posted the message about the switchover from World to Oakland, I'd
completely forgotten about the automated period reminder about the file
availability on World.

I have modified that periodic reminder, and will have it replace the one
mentioning World. It will, instead, mention Oakland.

Sorry for any confusion or inconvenience this may have caused.

Scott Ehrlich, WY1Z

--
=====

Scott Ehrlich	Amateur Radio: wy1z	AMPRnet: wy1z@wa1phy.ampr.org	
Internet: wy1z@neu.edu	BITnet: wy1z@NUHUB	AX.25: wy1z@wa1phy.ma.usa.na	

Maintainer of the Boston Amateur Radio Club hamradio FTP area on			
oak.oakland.edu:/pub/hamradio			

=====

Date: 16 Mar 1994 17:18:15 GMT
From: malgudi.oar.net!gomer.aldus.com!usenet@sun.com
Subject: Tickling the Ether
To: info-hams@ucsd.edu

In article <gregCMpq2C.BqF@netcom.com> greg@netcom.com (Greg Bullough) writes:
>[a very nice narrative]

Thanks, Greg. What a refreshing improvement to the signal-to-noise ratio.

David Mitchell

Aldus Corporation Bainbridge Ometepe Sister Islands Association

david.mitchell@aldus.com

davidm@bosia.org

My opinions are my own.

Date: Wed, 16 Mar 1994 19:45:52 GMT

From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!math.ohio-state.edu!

magnus.acs.ohio-state.edu!csn!col.hp.com!fc.hp.com!jayk@network.ucsd.edu

To: info-hams@ucsd.edu

References <2m09j7\$4i@apple.com>, <2m78pf\$5kh@news.iastate.edu>,
<763839599snz@g8sjp.demon.co.uk>

Reply-To : jayk@fc.hp.com

Subject : Re: 1x1 Callsigns?

: Calls is UAE *COULD* be anything that the competent authority decides to
: issue : that *begin with* A6. Who said that there HAS to be a number
: following the : prefix? 'Mandatory number' is something that you appear
: to have invented.

: Yes, your callsign prefix is 'N', and the reason it's followed by a '0' is
: simple beacuse the FCC decided it should be that way. According to callsign
: allocations for the USA, if the FCC had decided to issue you with the call
: 'NOTWITHSTANDING', then that would have been perfectly legal and acceptable,
: although perhaps not to you :-)
: Understand?
: Iain Philipps

As pointed out earlier in this string there are international agreements
on this subject. I'm not sure everyone would find NOTWITHSTANDING acceptable.
There are lots of exceptions though. I have worked V7A a number of times
in contests recently. I've never exactly figured out what the Bamahas is up
too. They always use the whole C6A as the prefix.

Some of the newer third world countries will issue almost anything you want
it seems. But last year Mozambique dumped its C9(any thing you want) call
system for the C9#Xxx. So there does seem to be a effort to use the
international standard. Although it is true governments can issue most
anything the wish.

I'm not sure I understand.

Peace, Jay K0GU

jayk@fc.hp.com

Date: 16 Mar 1994 20:24:04 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!
newsrelay.iastate.edu!news.iastate.edu!wjturner@network.ucsd.edu
To: info-hams@ucsd.edu

References <2m09j7\$4i@apple.com>, <2m78pf\$5kh@news.iastate.edu>,
<763839599snz@g8sjp.demon.co.uk>re
Subject : Re: 1x1 Callsigns?

Check the international agreements. By them, ham calls are to be a one or two character prefix (can include numbers), a number (hence, the mandatory number), and a one to three letter suffix (no numbers allowed).

Using this, UAE could not issue a call A6XX since their *prefix* is A6, not A. However, they could use a call A6#XX.

>Yes, your callsign prefix is 'N', and the reason it's followed by a '0' is
>simple beacuse the FCC decided it should be that way. According to callsign
>allocations for the USA, if the FCC had decided to issue you with the call
>'NOTWITHSTANDING', then that would have been perfectly legal and acceptable,
>although perhaps not to you :-)

You are correct in the FCC assigning the 0, they could assign any number (1, 2, 3, etc), and the FCC just happens to use call-number districts.

Therefore, 'NOTWITHSTANDING' would *not* fit as there is not number, thus no prefix or suffix. (You have to have something to attach them to.) It may be legal, but it wouldn't be an acceptable ham call according to international agreements.

--

Will Turner, N0RDV	-----
wjturner@iastate.edu	"Are you going to have any professionalism,
twp77@isuvax.iastate.edu	or am I going to have to beat it into you?"
TURNERW@vaxld.ameslab.gov	-----

Date: 10 Mar 94 12:47:21 EDT
From: hayes!bcoleman@uunet.uu.net
To: info-hams@ucsd.edu

References <CM2960.93I@ucdavis.edu>, <2l3nuj\$pr@bigfoot.wustl.edu>,
<1994Mar3.161621.4366@ke4zv.atl.ga.us>
Subject : Re: JARGON

In article <1994Mar3.161621.4366@ke4zv.atl.ga.us>, gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>

> Sure. Hams also talk about their operations and illnesses a lot. Old
> people tend to be sick a lot. And then there's the continuous blather
> about traffic. One rare occasions you'll stumble across a group that
> actually will tackle interesting topics.

Gary, a lot of it has to do with what you find "interesting." When we get older, perhaps we'll be spellbound to listen to descriptions of operations and illnesses.

As for traffic -- I enjoy talking about traffic, Atlanta drivers, etc.

> Some hams have a life outside radio.
> For the last two mornings, the discussion on my repeater has
> centered on restoring old Dodge Powerwagons.

Yawn.

> We also freely discuss politics,

Sometimes interesting....

> Unix wizard tricks,

<Snore>

> and the merits of .410 shotshell derringers versus .22 Mag derringers as
> belly guns.

And don't forget pickup trucks. Yup, often the KE4ZV repeater becomes the "trucks and guns" repeater. Even though it isn't in the "trucks and guns" band.

> We try to keep the ham radio
> related discussions off-line and handle that at lunches and over the
> telephone. Seems somehow "business related" to talk about radio on
> the radio.

Depends on what you talk about.

For what it is worth, the KE4ZV repeater is kinda unique in that there's no set "pattern" to operation. If you feel like making a comment, question or just changing the subject, you just leap in and do it. There's lots of doubles, and it keeps things interesting.

At least there's no boring roundtables. ("Well, I'll turn it to Joe. What do you have to say this morning?" "Don't have much to say other than good morning.... blah, blah, blah.")

Too bad other repeaters don't adopt this format.

--

Bill Coleman, AA4LR ! Internet: bcoleman@hayes.com

Principal Software Engineer ! AppleLink: D1958

Hayes Microcomputer Products, Inc. ! CIS: 76067,2327

POB 105203 Atlanta, GA 30348 USA !

Disclaimer: "My employer doesn't pay me to have opinions."

Quote: "The same light shines on vineyards that makes deserts." -Steve Hackett.

End of Info-Hams Digest V94 #298
